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NOTES ON THE NEWFOUNDLAND SEAL FISHERY IN 1905.

By Thomas Southwell, F.Z.S.

The Newfoundland sealing in the past season has been in many respects peculiar, and from a commercial point of view disappointing. For some years past it has been evident that the killing of the young Seals has taken place too early, and that, had they been allowed to remain a few days longer upon the ice, so rapidly do they increase in weight, the same number of "Whitecoats" would have yielded a greatly increased weight of fat. In my notes for the season of 1901 I showed that, owing to the whelping having taken place that year rather later than usual, whereas the killing commenced at the accustomed time, the pelts and fat averaged only 35 lb. as against a possible 60 lbs., and that a comparison with the yield of a like number of Seals in the previous season showed a loss of 165 tons in weight. Thus the destruction of an immensely larger number of young Seals was necessary to make up the weight of a full cargo.

This state of things became more and more apparent, and, with the consent of all the owners, it was agreed that in the past season the departure of the steamers should be delayed until 8 a.m. on March 13th, instead of the 10th as heretofore, and that no Seals should be killed till the 15th. As it happened, the first Seals were actually killed on March 16th.

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The result, although not meeting with universal approval, and, as will be seen, occurring under rather unfortunate and peculiar circumstances, cannot be regarded otherwise than with satisfaction in one respect, for the yield in the past season shows an increase in the net weight of the produce of a like number of Seals compared with that of the season of 1901 of no less than 779 tons. No objection is made to the delay in the date of killing, but it is contended by some experienced sealers that the vessels should be allowed to depart on March 10th, as formerly, thus affording a longer time to search for the Seals, and enabling the slower vessels to come up before the patch, when found, is wiped out. It is to be feared, however, that the presence of the waiting vessels in the immediate neighbourhood of the Seals would have a very disturbing effect, as was the case in the Greenland fishery. not to mention the temptation it would offer to a solitary vessel to evade the statutory regulation.

The tendency of late has been for the steamers to select the more northerly ports as their points of departure; sixteen of the vessels in the past season left Greenspond, and only two sailed from St. Johns, the two Gulf sealers, as usual, making Channel (Port-aux-Basques) their starting-place. The practice has been to steer N.E., hoping to meet the whelping ice in its southward drift. This in the past, as on many other occasions,* has had an unfortunate result, for, owing to the prevalence of N.W. winds, the pack was driven rapidly southward and seaward, so that the Seals were really much farther south than usual; in addition to which many of the vessels got jammed in the ice until too late to participate in the killing, thus accounting for the poorness of the return. The main pack was found about 130 miles E.S.E. of Cape Freels.

A fact worthy of note is reported by the 'Diana.' On March 29th she came upon a patch of Seals estimated at 600,000; the ice, however, was so closely packed that it was impossible to get near them. Eventually the ice opened after a storm of wind, but only a few were obtained, the young Seals having taken to the water. These Seals, it is said, were different in many respects from the ordinary Harps, "the flippers being longer and broader," and old sealers, who are very keen to note even

^{*} See notes for 1897, pp. 69, 70.



slight differences, said "they were the northern patch, which is seldom if ever cut up." One would like to know more about these northern Seals, and other departures from the normal, of which we have heard before. (See 1893, p. 128, and 1897, p. 71.)

Twenty-two steamers took part in the last season's fishery, the fleet being increased by the return of the 'Neptune,' a vessel of 465 tons net, which was absent in 1904. The result was 177,100 Seals, very unequally distributed, only three of the twenty-two vessels having more than 15,000; the 'Eagle,' the first to return, only fifteen days out from St. Johns, leading with 32,064, and the 'Southern Cross' making out with only 883. Two others had more than 10,000, and the remaining seventeen vessels mostly considerably below that number, the average for the whole being 8050, only seven of the vessels being above that number and fifteen below it. The total net weight of produce was 4189 tons, valued at £62,234.

The 'Eagle' was very fortunate in falling in with the young Seals; at first she ran N.E., but found nothing, and, the signs indicating an entirely different location of the main patch from that of former years, she ran south; and on March 16th, 130 miles E.S.E. of Cape Freels, struck a patch of "Whitecoats," which extended for miles, and was quite undisturbed. On the first day 7000 were killed, the next day 16,000, and on the two following days 10,000 each. During three days she had a monopoly of the pack, but was then joined by the 'Kite,' the 'Labrador,' and the 'Ranger,' which shared in her good fortune. Capt. Jackman describes the weather as intensely cold, and fifty of his men were badly frost-bitten; but there was a remarkable absence of snow, which is essential to the well-being of the young Seals, and they were, although above the average in weight, not so heavy as they would otherwise have been. other vessels had varying fortunes, but the great mistake seems to have been the time lost in searching for the Seals in too northerly a direction.

The two Gulf steamers were poorly fished, the 'Viking' having only 2280 old and young Hoods, and the 'Algerine' 6855 of the same. The 'Viking's' Seals were acquired under circumstances of great hardship. On March 15th she struck a

patch of Hoods, and killing began: but it was terrific work. The Seals, being far from the ship, had to be dragged for miles over the ice, the men making but one or two trips a day. This was off the Magdalenes. Capt. W. Batlett next tried to enter the Gulf, but about ten miles off St. Pauls met with a solid barrier of ice, and in attempting to force a passage the sheathing was torn off his vessel, and she "leaked furiously," and to such an extent that he had to bear up for home, the pumps going all the time. The 'Viking's' 1502 old Hoods and 778 young ones are said to be of enormous size, and weighed 146 tons 15 cwt. net, valued at 8972 dols., the hard-earned shares of the crew of 189 men being 15.82 dols. each.

The present is the twenty-fifth of these annual "Notes," and owing to various circumstances it is more than probable that it will be the last. Perhaps, therefore, I may be pardoned if I append a few statistics as to the results of the past quarter of a century's operations.

Formerly the sealing was prosecuted by means of nets set in the creeks and on the shore; then followed shooting from boats, which in their turn were supplanted by small sailing vessels of from 40 to 100 tons; these rapidly increased in number, till in 1857 Mr. Chafe informs us there were 400 of these vessels. The Seals must at that time have been very numerous, for in the year 1858 the large number of 507,624 were killed; but the year 1830 had produced a still larger number, 686,836 having figured in the returns, which, however, fluctuated then as now very considerably. In 1863 steam was introduced, and the schooners rapidly disappeared, till at present very few take part in the fishery; and it must be clearly understood that what follows will only refer to the results obtained by the steam fleet.

It was in the year 1876 that the 'Arctic,' a Dundee vessel, first represented the Scots in the Newfoundland sealing, their ships going north to the whaling at the conclusion of the voyage. In 1881 there were six of these vessels present, one of which, the 'Resolute,' killed 35,025 Seals in her first trip, and 5954, i.e., 40,979 in all (she afterwards killed three Whales in Davis Strait). Twenty-two vessels took part in the fishery of that year, seventeen

of which made second trips, the whole resulting in 281,949 Seals. The largest number which had been brought in by a single vessel in her two trips was in 1875, when the 'Proteus' made out 44,377 pelts; but the record voyage for a single trip was made by the 'Neptune' in 1888, when she landed 42,242 Seals. In 1893 these destructive second trips were abolished, and fishing prohibited after April 20th.

The total number of Seals which fell to the steamers in the past twenty-five years was 5,624,071, the largest number in any one year—that of 1900—being 353,276, and the smallest 109,304, in 1893.* This enormous total does not include the Seals taken on the shore, by the schooners, or the large number lost by the wasteful system of "panning," which would greatly increase the total.

In the 'Field' newspapers of July 29th and Aug. 5th I have given the number of Seal skins, and the value of skins and oil exported from Newfoundland in the past fifty years, as published in the Board of Trade returns, by which it is shown that during that period the produce of sixteen and a half millions of these animals was exported from Newfoundland and Labrador, representing a money value of more than nine and a half millions of pounds; and yet during the past twenty-five years there seems to be no serious falling off in the average supply. I can only repeat the belief I expressed in the 'Field' article, before referred to, that the continued prosperity of this important industry depends largely upon its being judiciously regulated. In this respect great improvements have been made of late years; but seeing the risks of losing panned pelts from various causes, such as fog or bad weather, it must be prejudicial to kill more Seals than there is a fair prospect of getting on board in a reasonable time!

Warning should be taken by the fate of the Greenland sealing, which since the year 1895 has been abandoned by the Scottish steamers as unprofitable.

The great natural safeguards against extermination are the difficulty of approaching the patches of breeding Seals, and the

^{*} These statistics are compiled from Mr. Chafe's circular, which, issued after all the vessels have made their complete returns, is the most reliable source.

practical immunity of the old ones. In the season of 1904, out of a total of 284,473 Seals killed by the steamers, only 5180 were old Harp Seals and 130 old Hoods. In this respect things are greatly improved. In some years, too, large numbers of the breeding Seals escape detection altogether, as has probably been the case in the past season. With these safeguards and careful regulations of the fishery, I see no reason to fear its early failure, and trust it may long remain the important source of revenue to the colony it is at present.

As on previous occasions, I have to express my best thanks to Sir Robert Thorburn and to the editor of the St. Johns 'Evening Herald' for their kind assistance.

A SUNDAY ON BREYDON.

By A. H. PATTERSON, A.M.B.A.

THE spell of a quiet Sabbath evening is upon me. The faint clamour of the church bells to the eastward has died away, and the evening service has begun. The tide is out, and as I sit in the "well" of the old houseboat 'Moorhen'-now high and dry at her last moorings on a Breydon "rond"—a wide area of mud-flats, bare of water save in the shallowest of pools, in which the Dunlins can run thigh-deep, lie spread before me right away to the long monotonous bank of houses that, broken here and there by a steeple or a more ambitious chimney, represents the town of Yarmouth, whose only appearance of life, although teeming with Bank Holiday anticipating crowds, is exhibited in the smoke of an ice-factory, and the whiter output The flats, richly coloured with the of a distant locomotive. varying greens and browns of the prostrate "wigeon-grass" (the Zostera marina of botanists), and the "raw" (Chætomorpha linum), and the "cabbage" (Ulva lactuca), remind one somewhat of a sloppy hay-field. An hour hence and the distant lights will twinkle in the gloaming, and the glare of a holiday resort will make one thankful that there is one little isolated freehold conveniently far away from it, where restfulness and quietude are assured—where the tremulous notes of the Whimbrel and the mellow cry of a Curlew only break the stillness. In the middle distance runs a silvery liquid thread; it is the "channel," along which glide two or three white-sailed yachts, and an occasional wherry, the skipper of the latter, in these hard times, gladly enough throwing in a seventh day's passage to make up a poor six days' earnings. Such is Breydon, a salt-water broad so often described, and yet always so fascinating—to me, at least.

7 p.m.—At this moment there are a few blotches of cloud overhead, yellowing, reddening, purpling as they glide down-

ward to the eastern horizon; and below the setting sun stretch wave-like fringes of clouds, fantastically gilded on their topmost edges, and deepening into furnace-red as he sinks behind each ridge. The only birds on the wing are a few late-flying, family-bored Sand-Martins, and a restless Gull or two; while the only cries heard at this moment are the laughing "yah-yahs" of a Black-headed Gull, the "tweety-teet-teet" of a couple of Common Sandpipers, the petulant "lou-eet" of a Ringed Plover, and the calls of a flock of Lapwings on the marsh behind. Some of these "Peweets" have used the mud-flats to-day, a rather unusual proceeding with them.

I have just cleared away the tea-jug, the remnants of a loaf, and all that is left of a cream-cheese sent as a "tit-bit" by Banham, the marshman's kindly wife, who, herself content perhaps with the loneliness of a life on the marshlands, half pities the hermit who seeks even lonelier quarters from choice. A lump

of steam-coal is glowering in the cabin-stove.

What a delightful and characteristic cry of the oozy wilderness is that of the Curlew! One yonder is probing and picking among the "grass"; a small Crab, a mudworm, an Idotea linearis, or a Shrimp in an adjoining puddle, all alike are fish in his I saw one fellow this morning toying with a Flounder he had whipped up at the end of his sickle-bill. It travelled no higher up it; he twisted and turned it round and round, flung it on the wrack, picked it up again, shook it, all the while knowing he could not hope to swallow it, nor did he try to; then he flung it away in disgust. Why is it the Curlew can never pass by a "butt"? The moment after he had thrown it down he ran to a worm-bore, and dragged out a rag-worm. See! how the fellow jumped! He had disturbed a clam, in passing on, that ejected a small jet of water as it sank to safer hiding. I have often been amused at the Curlew's nervousness.

Hearken! how's that for a concert? Twenty-two freshly arrived Curlews, all calling at once, now flew "upwards," coming in from seaward—upwards, i.e., towards the Burgh end of Breydon. They may rest a while there on the flats, but more probably they mean to keep on. They were hard to count at close quarters until they obliquely opened out a couple of furlongs away, and thus made their counting easier through this

powerful old marine telescope. Handy old instrument! How many Spoonbills have I not watched through your lenses! That odd Curlew piped as his relatives went by, but remained. He means no doubt to stay a few days longer.

7.30.—The sun has dropped behind a purple cloud-bank; his glories are reflected upon a shoal of cloud specks that remind us of a flock of gilded sheep. The young crescent moon is high up in the heavens, and travelling along a wind-promising sky, that did not belie our forecast for the morrow. As we close the cabin doors several Curlews are excitedly "koi-koi"-ing overhead; they have been scared by a distant gun. A marshprowler had probably fallen in with some young Mallard. The watcher yonder, undoubtedly fuming in his houseboat, thinks differently. He cannot be in two places at once, and most probably is wondering whether that lot of Curlews "up'ard" had lost any of its members. Redshanks are piping on a flat, making a late supper, most probably of marine Gammarida, mixing with them, as likely as not, a few small Hydrobiidæ that hide under the prostrate "wigeon-grass," and long for the rising The clear double "pleu, pleu" of a Greenshank away to the right is answered by a fellow out there on the left. How loudly they pipe out their distinct and metallic call-notes! But those Curlews! they cannot forget it. We can hear them long after the doors are closed, and the clamour calls vividly to mind how as a boy I used, on a drizzly night during the autumnal migration, to slip out into the back yard at home and listen eagerly to the bewildered "sickle-bills" above the glare of the town lights, charmed and thrilled, too, by the key-whistled sort of note the Dunlins blew; and when the Knot and the Godwit, and now and again an unknown bird, joined in the chorus, that made some of the townsfolk shake their heads, and think of the spirits of the night.

Feeling considerably "run down," on the afternoon of Aug. 5th I provisioned my punt, and started from Breydon Bridge to spend the Sunday and a night or two on my favourite Breydon. The flood-tide I was unable to catch, and the wind was dead against me I pass over the mishap or two that befell

me; I had a terribly hard pull against that raging ebb, that blistered even my horny hands, and took two hours to accomplish a trip that I can usually sail in twenty minutes. My houseboat lies two miles north-west from the town, on a rond against Banham's farm. I tumbled into her, and very soon had a rasher of bacon frizzling over the cabin-fire, to the wonderment, perhaps, of a couple of Black-backed Gulls to leeward, who found it difficult to associate such a savoury aroma with their favourite carrion. The only unusual "callers" were the afore-mentioned Lapwings, which for some reason or other have, this August, haunted the adjoining marsh at night. It cannot be worms—it must be "Leather jackets" they are seeking, for they are not particular birds so long as plenty offers; and the larvæ of the Tipula are dainties Master "Hornpie" delights to eat.

Last night I slept well. The first visitor of the morning was a Pipit. How the Pipits and Wagtails of the year do like to hear the patter of their little feet on my white-topped cabin roof! I can assure them they are always welcome.

On opening the doors—quietly and slowly, as I always do, for one never knows what company one may have in front of him-I discovered scores of Common Gulls (Larus canus) and Black-headed Gulls. These were running about the flats, some but a stone's throw away. All were worming, and snatching up Shrimps and Gobies, and no one knows what else, for many young fishes are stranded when the tide falls; not that it matters much to the little "Eel-pouts" (Viviparous Blennies), Flounders, Gobies, Shore-crabs, and various other Crustacea. for some will wriggle into the ooze, or hide beneath the Zostera, and comfortably await its return. Not so well off are the "Whitebait" (tiny Herrings) and the juvenile Smelts, for after a short helpless wriggle, unless there happens to remain an inch-deep pool to hold them, they must succumb. No wonder the smaller Gulls are most industrious ramblers on the flats, and small wonder they are always so merry.

Half a mile beyond this scattered flock are a number of fine old Greater Saddle-backed Gulls, evidently unencumbered this year by domestic duties, for they have been here all the summer; with them are some younger blotched and speckled examples. They are all busily turning over the wrack in search of Shorecrabs, and such chance fishes they may uncover. You can always tell when they are successful in their search, for a quick grab is followed by an uplifting of the head, and a tangle of weeds depend; in the bight of them some Crab or Flounder is held fast by the strong bill. A jerk or two and the Crab is flung clear, and is as quickly snatched up again, and crushed, to be swallowed with a self-satisfied shake of the head. I have examined the excreta of these Gulls; they usually sleep on the "lumps" at regular intervals, and leave them besmeared as with lime. In these white patches are small fragments of halfdigested claws and carapaces. Here and there a big Gull has, after repletion, dropped down for a nap, waking for a moment now and again to adjust or readjust some refractory feather, or stretch a wing. I have a strong suspicion that some sharpbiting parasite has disturbed its nap.

A Shoveler-duck now flew past those Saddle-backs, and dropped into a drain. That bird was shot before the day was out by a gunner higher up. At the same moment a Cormorant, a far from common visitor to-day, is pottering about in Duffell's drain; he is after a Flounder or two for breakfast. The Gulls usually resent a Cormorant's intrusion, but to-day, for some reason best known to themselves, they do not.

Seventy Whimbrel, crying as they flew, passed by, and after a few evolutions up and down kept on, and only odd birds frequented the place all day. These came in from the north-east; mayhap they were high in the air, but these wide-spreading flats so attract passing migrants that if they do not intend to stay they seem compelled to drop within hail of their fellows; then away they go. It was not until the third attempt, and when they opened fan-like, that I could accurately count them. So large a bunch in August is rather unusual. We see more of them here in May.

Dunlins in small flocks, with which are associating a few Ringed Plovers and two or three Curlew-Sandpipers, fuss around, changing their feeding-grounds. Some of the Dunlins still retain much of the garb of summer, but they are mostly young birds of the year. A little way off are a few Redshanks and a solitary Grey Plover, and a Greenshank sticking his stiff bill under the wrack, and job-jobbing at the Gammaridæ, that scuttle away

with almost the alacrity of sandhoppers.

There has been a stranger about to-day; I cannot for the life of me make out what bird it is that produces that queer cry. The note is easily distinguishable, whether uttered alone or in chorus with other birds. What to liken it to I am at a loss to suggest. It is high-pitched; it is too loud for a Temminck's Stint; it is not musical like a Plover's; it is a triplicate note after the style of a Greenshank's; but differs from all I know. I heard it in those dark nights of boyhood—rarely, I will admit—but the note always troubled me, as it does to-day. I would give anything to know its author, but then the novelty would be gone. There it is again! I scan every bird within range, but to no purpose. I was just as puzzled for a long time by a Bullfinch that whistled in hiding; the charm was gone when I detected the fellow.

A Black-headed Gull has discovered a finger-thick Eel. How the fish, seemingly knowing its danger, wriggles! how the bird, unmistakably excited, shakes and pinches and runs about with it! It is not many moments ere another Black-head espies it, and gives chase. I follow the twain with my telescope, and they alight and squabble at the rond-edge near "Stone Corner." Flying, pursuing, shaking, dodging, the two birds settle again, and the original possessor still holds its own. Now he has halfswallowed it, when the Eel flings its tail round the red upper mandible and tightly twists itself, to the discomfort and annoyance of the bird, which runs about trying to shake off the coil. Down drops the Eel—he has it again. The Eel is becoming weaker, but still struggles, when the Gull by a great effort swallows it. But out pops the Eel's tail again, and the bird has to vomit the rest of it. The Eel is not smitten with its discovery, and again protests vigorously against a renewal of the experience. The Gull swallows it again, and once more ejects it; but on the third attempt, made desperate by another Gull coming up to investigate, the catcher gets it down, and, by holding his head high and straightening his neck, succeeds finally in imprisoning it. The swellings and writhings in the bird's neck, visible even to myself, could not have been comfortable to him; but I will vow that was not the first Eel he has tackled. At last the Eel must have succumbed, for the Gull, assuming his ordinary freeness of deportment, walks deliberately to a puddle and sips with ease.

The prettiest birds upon the wing are the Little Terns. There are several about, both old and very immature young. Hither and thither, mostly with heads to wind, they fly, with bills pointed vertically downward, ready the moment those keen eyes detect a little Herring dashing about below to fall upon it, seldom to miss their aim; and when any small fry has been secured, away they go to the edge of a flat, where the youngsters, with the up-winged fussiness of Pigeon squabs, snatch at and catch the fish as it drops from the parental bill. The light, airy-winged creatures are beautiful to look at, and one is glad the month's extension of close-time (to all save Ducks) gives the fairy-like Tern a chance of passing south before the indiscriminate gunner has the opportunity for destroying such gems in feathers.

There are unusually few Herons about to-day. Two only at the present time are within view-one a bird of the year, the other, I should say, a "three-year-older." The latter I now saw strike an Eel in the "run" he is standing knee-deep in. Eel weighs, I should say, at least half a pound, and, tightly gripping the lively fish, the Heron walks deliberately out on to the flat. For fully ten minutes that bird plays with it-plays, I say—but there is no doubt, in letting the Eel fall upon the "grass," in which it vainly tries to squirm, he is only endeavouring to get a better grip, and at each strike he pinches peevishly: a dozen times at least does the Heron drop that Eel. and as many times does he seize it again; now and then some filaments of weed blow, pennant-like, from his bill. I have seen a Heron thus engaged bullied and pursued by three or four less fortunate fellows, to finally lose it, having dropped its prey on the mud below, where it has promptly buried itself in the coze, to the annoyance of all, and the great chagrin of one. Our friend yonder has no rivals, and at length, having knocked all resistance out of it, he bolts his prey, taking a sip in the same way the Gull has done; and having in all likelihood slightly "overloaded his stomach"-for he has been fishing for half an hour-he draws his head into his shoulders, lifts one leg, and takes a nap.

rising tide comes well up his odd leg ere he awakes to resume his fishing.

It is dinner-time, and the tide is at the full. The Redshanks, washed off the opposite flats, have betaken themselves to the marshes; the small birds restlessly pass and repass; the Gulls are on the wing fishing in the channel; there are drowned mice, bits of fish, and what not always borne upstream from the town. The Curlews and Whimbrel are preening their feathers and sleeping on the rond west of us.

A few Eels brought to us by an old Breydoner make a by no means unsavoury Sunday dinner, and the fry-pan is frizzling a merry tune. The steaming coffee adds to a pleasant aroma. I wanted some brother naturalist to have dropped in just then, for there are enough dainties for two, and a chat with a kindred spirit is refreshing. And there have been sufficient birds to be seen to-day to delight a dozen. After dinner I fling myself on the settles, throw a rug around me, and read myself into a refreshing sleep. I am like the Heron; I have my fill and take a nap.

When I awoke the tide had fallen, and the flats had again become bare, and a host of various Gulls were scattered all around, some asleep, some arranging their dainty plumage, and a few strolling about snatching up something towards a

supper.

I had flung out a few minutes since some Eel-bones, a couple of small dead Eels, and an opened bloater which had become tainted. I knew if the Gulls did not find them the Crabs most certainly would. I was scribbling these notes, when suddenly a beautiful adult Common Gull wheeled round, pounced on one of the sections of an Eel, and bolted it. He next snatched hold of the bloater by the tail, when he was "flown at" by a couple of Black-headed Gulls. They all "spotted" me simultaneously, for I was writing not half a dozen yards away, with my face to the open doors. Down dropped the bloater, and a few yards beyond dropped the Gulls; one of the six Black-heads—for there were by this time gathered half a dozen—had a mouse-grey hood split on

the crown with a streak of white, and he had also a white chin. Two other adult birds were as white-headed as in winter, with the black ear-spots distinct and isolated. Another had a dark line running from each ear-spot to the crown; the others were blotched. So soon does the summer hood vanish after nesting-time in some. The Common Gull stood guard, so to speak, over the tit-bits, and both awing and afoot drove off the others each time they were bold enough to presume. I finally told them all to go with a flourish of my hand.

The Common Gull still sits there a short way off, loth to leave so dainty a morsel, and he may yet pluck up courage to dash in and snatch it away. I am going to take another nap.

SUPPLEMENTARY NOTES ON THE BIRDS OF ANGLESEA.

By T. A. COWARD.

In the spring of 1905 I spent from April 12th to June 13th in Anglesea, for the greater part of that time making Rhos Neigr my headquarters. The village of Rhos Neigr is situated at the southern end of Cymmeran Bay, at the mouth of the Crugyll, a small stream which flows through marshy ground-saltings as it nears the coast-and separates the sand-hills upon which the village is built from the more extensive sand dunes and common which border the western coast to the strait which divides Anglesea from Holy Island. The sandy shores of Cymmeran Bay and of the coast to the south and south-east of Rhos Neigr are broken here and there by rocky outcrops, mostly covered at high tide and consequently rich in seaweeds, but in places above high-water mark, tidal stacks and islets, which are richly clothed in spring with sheets of Scilla verna, thrift, and sea campion. Llyn Maelog, a sheet of water five-eighths of a mile in length, lies close to the village: at its western corner there is a dense bed of reeds and bog-bean. In these reeds many of the migrants roost when they first arrive.

A few of the summer migrants had reached Anglesea in March—Wheatears and Chiffchaffs, for instance; a few Swallows had been seen, and no doubt some Sand Martins and other birds may have passed prior to April 12th. Fresh arrivals, however, of these birds, with the exception of Chiffchaffs, were noticeable in a locality which can support only a limited number of breeding birds, and I was able to watch for the advent of the species which usually reach us later in the season. There was, so far as I noticed, only one considerable "rush" of migrants (on the night of May 1st), but there were many fluctuations in the numbers of the incoming or moving birds.

In the early days of April the wind was chiefly in the west; we had very cold weather from the 6th to the 9th; about this time the wind got round to the east, and on the 12th was blowing from the S.E. and freshening. On the 16th it blew strong from the N.E., and remained N.E. or N., variable in force, until the 20th, when it was lighter, and the weather much warmer; on the 20th the wind backed to the N. For the next few days the wind was off the sea, W. or N.W.; it fell on the 25th, and blew from the S. or S.W., freshening again on the 28th, and backing to the S.E. on the 30th, finally settling in the S. During the night it dropped, but continued gentle from the same quarter. On May 2nd the wind veered to N.W. and rose high, continuing thus until the 4th, when it veered to N.E., and next day to the S. After that we had warmer weather and westerly winds until the 12th, when the wind again got round towards the N., and later to the N.E. and E., where it continued until the 23rd. Then it backed to the N.W., W., and S.W., until on the 27th we had warm light breezes from the S., the month closing with gentle winds from the N.W.

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These indications of the wind-direction roughly correspond with the observations made in Manchester, but as a rule the force of the wind, especially when off the sea, is stronger in Anglesea than further inland. Wind rather than temperature appears to influence the arrival of migrants and their movements after they have arrived; I have therefore only stated the most noticeable changes in the wind which might have influenced the arrival or departure of the various birds.

I was able to add eight species to the list of birds which occur in Anglesea or off the coast. One of these, the Fieldsare, is no doubt common in the winter; and the Goldeneye is likely to occur on the llyns, but we had not come across it before, not having visited the island at the right season. The Garganey is never a common duck, and I was lucky to see it; Wigeon we had heard of, but had not actually seen until this year. Mr. S. C. Cummings met with them first in March. The Woodcock may or may not have been a breeding bird, but, considering the time of year when I saw it, I think that it probably had nested. The Little Stint and the two Divers—Red- and Black-throated—were of course passing migrants, as were also the Yellow Wagtails, birds we have not previously met with in the island. Other species which we had seen before I met with in new localities or

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in greater numbers than usual. I have not attempted to mention all the birds I saw, only referring to those about which there is something to add to what we have already published,* or to record movements of the migrants.

FIELDFARE.—On April 15th I saw a flock of perhaps thirty Fieldfares feeding in a field near Llechylched.

WHEATEAR. - Wheatears were already established when I arrived at Rhos Neigr; a male used constantly to sing from the edge of the terrace of the house in which I was staying. The nest was in a rabbit-hole in the sand-hills a few yards' distance from the house. On June 4th, when "Coch-v-bondhu" (Phyllophertha horticola) were swarming all over the dunes, I watched a female feeding her young with the beetles. Every few minutes she brought food to the hole, and though at times she brought caterpillars and once a small butterfly, the majority of her captures were chafers. The male once or twice brought food, but as a rule he mounted guard on the summits of the dunes and made a fuss whenever anyone appeared within sight. Mr. S. G. Cummings saw a male Wheatear at Llys Dulas on March 20th, and on subsequent days met with parties of four or five: on March 24th he saw about two dozen in a field at Bull Bay. I did not notice any fresh arrivals in April, except on the 17th. when I came across a party of six in a field near Llyn Penrhyn.

Whinchar.—On May 2nd there was a "rush" of migrants, mostly Willow Wrens. A male Whinchat was feeding in a field close to Rhos Neigr village: I did not see it there again. On the following day there were a pair on the Cefni marsh, where the Holyhead Road crosses the river: in this locality a few pairs nest. On May 7th a male was singing on the telegraph-wires where the railway crosses the common north of Rhos Neigr: it was probably a passing bird.

REDSTART. — The Redstart is an exceedingly rare bird in Anglesea; on May 16th a pair were in the one locality where we have noticed them, on the Beaumaris-Menai road, but they may have been there some days before I visited the spot.

WHITETHROAT.—The first Common Whitethroat was singing on April 28th; a few more arrived with the rush on May 2nd, and by the 5th the bird was generally distributed and abundant.

^{* &#}x27;Zoologist,' 1902, pp. 401-415; 1904, pp. 7-29; 1905, pp. 213-230.

I heard the Lesser Whitethroat singing at the old place between Beaumaris and Penmon in June.

BLACKCAP. — The Blackcap had reached the woods which border the Straits on May 3rd. Later I heard several in the woods at Llangefni and other places.

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Garden Warbler.—At Coed Cadw, near Llanfaes, a Garden Warbler was singing on June 12th. This is a locality where we have not heard the bird before.

GOLDCREST.—A Goldcrest was singing in the small plantation at Plas Maelog, near Rhos Neigr, on April 14th.

CHIFFCHAFF.—Mr. Cummings heard the Chiffchaff at Cemllyn Bay on March 21st, and on the 24th at Porth Wen; neither of these are localities where the bird would remain; but on the 25th he heard one in the trees at Llanfairynghornwy, where we have heard the bird before—one of the few localities in Northern Anglesea where it nests.

WILLOW WREN. — The Willow Wren was heard at Abersoch, in Carnarvonshire, on April 7th; on the 10th it was seen by Mr. Cummings near Chester, and on the 12th by Mr. L. Wilson Roberts at Barmouth. On the morning of April 14th I heard two singing in one of the few clumps of trees in bare Western Anglesea. Next day I found it was plentiful inland, and by the 16th Mr. F. Brownsword informed me it was swarming at Old Throughout the remainder of April Western Anglesea was full of Willow Wrens, there being many in all places where there are trees, and a few were in every hedge or fair-sized clump of brambles; there were certainly more than we have noticed later in the season, when the passing birds have moved, and only the nesting birds are left. Abundant though Willow Wrens were in April, their numbers were insignificant compared with the multitudes on May 2nd. On May 1st the wind (almost due S.) sank to a gentle breeze, and next day it changed to N.W. When I turned out on the morning of the 2nd, I found at once that there had been a decided "rush" of migrants during the night; every bush, every hedge, every clump of brambles in the fields, or patch which trails over the low turf walls, had one or more Willow Wren in it. Many of these birds were singing, but the majority were silently and busily feeding. I examined many with my glasses, but failed to detect a single Chiffchaff amongst them.

nor did I hear the note of this bird. Not only were Willow Wrens singing in the brambles and stunted thorns which grow beside Llyn Maelog, but numbers of them were moving about in the extensive reed-beds, singing and feeding.

Other migrants arrived with them; Common Whitethroats, Sedge Warblers, Cuckoos, Corn-Crakes, Swallows, and Sand-Martins were all in greater numbers on May 2nd than I had noticed previously; Dunlins, Ringed Plovers, and Turnstones were more abundant on the beach, and there was a fresh arrival of White Wagtails. On this day, too, I saw my first Swift and Whinchat.

The numbers of the Willow Wrens remained about the same for a day or two, but they soon diminished, and by the middle of the month all but the local birds had departed. On two occasions later I saw a Willow Wren singing from the top of the wire covering of a chimney in Rhos Neigr village.

Wood Wren.—The Wood Wren is absent from the immediate neighbourhood of the western coast, so that I do not know when it arrived. I did not hear any in the woods which bound the Straits on April 25th, but there were many singing to the south and east of Llanfair P. G. on May 3rd. Two were in song in the woods at Llangefni on May 5th.

Sedge Warbler. — On April 18th the first Sedge Warblers appeared in the reeds at Llyn Maelog; after that date a few sang daily and in the evening until May 2nd, when apparently the local birds arrived, for from that time the bird, which is abundant in the district, was common.

Grasshopper Warbler.—The Cefni marsh, where the Holyhead Road crosses the river, is a locality where we have several times heard and seen the Grasshopper Warbler. It was here, on April 25th, that a friend heard the bird singing; on May 2nd I found it in its usual place. The first bird I heard in Rhos Neigr was trilling on April 29th in a field enclosed for building purposes and allowed to run waste; I heard another here—perhaps the same bird—on May 15th, and one at Llangefni on May 18th. The bird is much less plentiful in this part of the island than in the east.

DIPPER. — In 1904 we added the Dipper to the list of birds which we had found nesting in Anglesea. I visited the spot

where I had found the nest, but saw no signs of the birds on the brook. On May 18th, however, I saw a Dipper on the river Cefni, just above the town of Llangefni. This part of the stream appeared to us to have more of the character of a Dipper's haunt than most of the slow Anglesea streams, and we had looked for the bird here before. I could not find any trace of a nest, although there were many suitable situations.

Long-tailed Tit. — The Long-tailed Tit is a bird we have seldom met with in the island. On May 5th I saw a single bird at Llangefni, but in the woods near Beaumaris I came across a number of pairs, and was informed by the gamekeeper that the bird is not uncommon in that locality.

COAL-TIT. — The Coal-Tit also occurs in these woods, but I again failed to find the Marsh-Tit.

CREEPER. — The Creeper is by no means uncommon in the woods to the north of Beaumaris. At Llanfugail, on May 27th, two pairs of Creepers had nests; one pair were building in a crack high up in a pear-tree in an old walled-in orchard, and another had built behind a notice-board on the church wall. The bird, when it visited the nest, alighted below the board and ran up the wall; when disturbed it edged out sideways, ran a short distance up the wall, and then flew off.

WHITE WAGTAIL. - Pied Wagtails, during the third week in April, were more abundant than I have previously noticed in Anglesea, though I have no doubt that most of the migratory birds had passed before that time. On April 14th I came across a migratory party of White Wagtails on the beach close to Rhos Neigr village, and from then until the end of May birds frequented this spot. Their favourite haunt was a strip of shingle bordering a sandy cove amongst the rocks. Here the drifted seaweed collects at high-water mark, and when it dries at low tides attracts numbers of dipterous flies and sandhoppers. At first the party consisted of some twenty birds of both sexes. They were very tame, and fed within a few feet of me when I was seated upon the shingle. The birds constantly chased one another, darting across the sand and shingle, dodging sharply to the right or left, and calling as they flew. Occasionally one of the male birds would utter a short snatch of song, very similar to the song of the Pied Wagtail. On the 16th I met with a single bird on the

river at some distance from the beach, and on the following day saw a dozen feeding in a field near Llyn Penrhyn; I followed these birds as they slowly worked their way across the common in the direction of Rhos Neigr; no doubt they were some of the same party. Until the 28th the numbers remained about the same, though at times the birds were scattered over the warren at some distance from their usual haunt; at other times they rambled over the rocks, sand, and shingle in the immediate neighbourhood of the village. By the 28th their numbers had gradually increased; I estimated that there were at least thirty or forty birds, but two days later I could only see a dozen. Possibly, however, some of the birds may have been feeding elsewhere. On the morning of May 2nd, the day when Willow Wrens were so abundant, I found that fresh birds had arrived; there were at least sixty in the usual spot. Two days later I came across four on the north shore of the island at Cemllyn. Towards the 12th the N.W. or W. wind got round to the N., and later, on the 13th and 14th, was easterly; on the 14th I could only find about a dozen birds, and four days later-easterly winds still prevailing-their numbers were further reduced to These few birds-I took them to be laggardsremained for ten or twelve days longer. On the 30th I could not find any about, and a single bird on June 2nd was the last I saw. Some of the hens had very little, if any, black upon the crown. Mr. O. V. Aplin, who saw the remnant of the birds. suggested that as they remained so late they were probably Arctic and not Continental birds. In the evening the birds roosted in the Maelog reeds at a short distance from their usual feeding ground.

GREY WAGTAIL.—On two occasions I saw the Grey Wagtail on the Cefni at Llangefni, and on June 12th saw a pair with young on a small stream at Coed Cadwr.

Yellow Wagtail.—The Yellow Wagtail does not appear to breed in Anglesea; we have kept a sharp look out for it every spring when we have visited the island. It does, however, occasionally pass on migration. On April 18th a male was feeding on the marsh near Rhos Neigr, and a male and female were with a few of the White Wagtails on the warren near Llyn Maelog. On April 21st a male was feeding with the White

Wagtails on the beach; on the two days between the 18th and 21st I did not see any Yellow Wagtails, nor did I see them after the 21st.

SPOTTED FLYCATCHER.—The Spotted Flycatcher was in the Straits on May 16th, but I cannot say when it first arrived, as it is not a common bird in Western Anglesea; after that date I met with it in a few of its usual haunts.

SWALLOW and SAND-MARTIN. - Swallows arrived early in North-western England and North Wales. The first I heard of was seen by a friend, who assures me that he did not mistake the species, near Bodorgan on March 22nd. Following this came a newspaper report of one between Beaumaris and Pentraeth on April 1st. On April 7th birds were seen by reliable observers at Afon Wen and Abersoch in Cardigan Bay. The Swallow reached Cheshire about this time; on the 9th Mr. Oldham saw it at Oulton; on the 12th Mr. Cummings noted it at Chester, and other birds were seen near Congleton. On the 13th, when a cold and moderate breeze was blowing from the south-east, I saw three Swallows working against the wind, steadily flying across the country. Next day the wind freshened and blew more from the south; a number of birds were flying up and down behind the shelter of a tall hedge, and occasionally resting on the brambles on the northern side of the hedge. Sand-Martins were fairly plentiful in Cheshire before I left-they had been there since March 29th, and had been seen at Abersoch, in Carnaryonshire, on April 8th-but it was not until the 15th that I saw any near Rhos Neigr; half a dozen were flying over the waters of Llyn Penrhyn, where Swallows were fairly plentiful. On the 16th I saw no Swallows, but a few Sand-Martins were feeding over Llyn Maelog, and in the afternoon-the wind blowing strongly from the N.E.-I saw a party flying north-west along the shore, keeping low behind the shelter of the dunes. High easterly winds continued until the 20th, and both species in small numbers roosted nightly in the reed-beds, feeding by day over the lake. On the 20th the wind worked round to the N., and abated in force; not a single Swallow or Sand-Martin was to be seen on the lake, and I only saw one-a Sand-Martinall day. On the 21st, however, Sand-Martins were abundant again, and a few Swallows appeared. The numbers of both

species fluctuated a little until the 27th, when the wind had again risen and blew strongly during the night from the S.W.: on the morning of the 28th there were more than a hundred Swallows over the water. These appeared to pass on, and the next movement was on the day of the rush of migrants, the night of May 1st-2nd; on the 2nd both species were plentiful. After this there were always a few birds about, but no great increase until the 14th, when I saw on the cliffs to the southeast of Rhos Neigr many small parties of both species steadily moving along the coast; I saw no birds flying south. In the evening there were large numbers on the lake, while others were still passing on, crossing the sand-hills due north, as if making for the northern coast by the shortest route. however, may simply have been going to roost in the reeds round the Valley lakes. I noticed these northerly movements on the 19th and 21st, by which time the local Sand-Martins were busy at their nesting-holes; small parties roosted in the reeds so late as the end of the month.

HOUSE-MARTIN.—It was not until May 19th that I noticed the first House-Martin, but I expect the birds—rare in Western Anglesea—arrived earlier in more inland localities; by the 26th it was well established in several of the places where it nests.

LINNET.—Early in April I was much struck by the number of small parties of Linnets which continually flew twittering over the sand-hills and commons; by the middle of the month the resident male birds were singing everywhere: these flocks were much in evidence until about April 19th, but on the 25th I noticed numbers roosting in the reeds, the males singing as they settled down for the night. Even in May, so late as the 24th, I saw a few of these flocks, and can only suppose that migratory Linnets pass along this coast.

CORN BUNTING.—During the winter the Corn Buntings which remain in Anglesea flock, but by the middle of April all these flocks had dispersed, and the characteristic song of the male was to be heard on every side. On May 1st, however, I noticed a flock of between twenty and thirty silent Corn Buntings, together with a few Greenfinches and House-Sparrows, flying along a hedgerow near Ty Croes. It seems probable that these were a

freshly arrived party, for I met with no other flocks in April or after this date.

JAY.—Again I did not meet with the Jay, but was informed by a gamekeeper on the Baron Hill Estate, Beaumaris, that in the spring of 1904 he himself shot one, and that another was killed in the Baron Hill woods by one of the other keepers; these were the only two he had ever heard of in Anglesea.

Swift.—A solitary Swift came in with the rush of migrants on May 2nd. On this day the Swallows and Martins hugged the shelter of the reeds, for the wind rose high after the lull on the 1st, but the more powerful bird flew boldly backwards and forwards high above the lake. Mr. L. Wilson Roberts reports a solitary bird on the same date at Barmouth. No more appeared at Rhos Neigr until the 7th, when I saw five at Llyn Penrhyn. These birds flew over the water for a short time only, and then moved off in a northerly direction. On the 8th and 12th I again saw single birds, and on the 11th Mr. K. J. P. Orton reports that the bird reached its usual haunts at Bangor in some numbers. By the 14th the Swift had reached its quarters inland, but towards the end of May several parties of birds appeared, played for a short time over Maelog, and then departed.

NIGHTJAR.—The Nightjar was churring in its customary haunt—a rocky outcrop near the lake—on the evening of May 18th. After this the bird, which abounds in Anglesea, became general, but I did not notice any movements of passing birds.

KINGFISHER.—Though we have seen the Kingfisher in Anglesea in September and October, we have not met with it in the spring. On May 3rd, however, when I was standing on the Holyhead Road bridge over the-Cefni, a Kingfisher darted down the river, flying low along the surface and whistling, and disappeared in the distance. As the stream here is embanked and very straight I could see it for a great distance. Shortly afterwards a bird, probably the same, came up stream, flying in a similar manner, and disappeared round the bend in the direction of Llangefni. Last winter a pair of Kingfishers were noticed on the stream north of Beaumaris, where the Dipper nested in 1904, and apparently they remained and perhaps nested. They were seen several times this spring on this stream and one which flows into

it by the gamekeeper and one or two of the farmers. I visited the place in June, and found it to be quite suitable for the birds, though owing to the dry weather there was very little water in the brook. I saw nothing of the birds; but a boy whom I questioned about them, and who appeared to know them quite well, assured me that they had been about a short time before.

Cucкoo.—On April 29th a Cuckoo was calling; others came in on May 2nd, and by the end of the first week in May the bird was abundant everywhere.

Long-EARED Owl.—The gamekeeper whom I have mentioned before described to me minutely a Long-eared Owl which he had seen in May this year close to his cottage near Beaumaris. The bird was being mobbed by a number of diurnal birds, and his attention was attracted to it by their cries. It flew from one to another of the trees in a clump of tall firs.

GANNET.—On May 28th Mr. Oldham, Mr. Cummings, and I saw two, or possibly three, Gannets off the coast to the south of Rhos Neigr. One was an adult bird with a pronounced yellow head, the other immature.

Garganey.—On one of the lakes on April 15th I watched for some time a fine male Garganey. When I was still at a distance from it I noticed the prominent white streak above the eye and back along the neck, which showed in strong contrast to the dark crown. From a distance the whole of the wings, except the flights, appeared to be bluish-grey. When I got nearer to it, behind the shelter of a friendly turf-bank, I could easily make out the elongated scapulars, the brown cheeks and breast, and the white wing-bars. It was feeding in company with some Wigeon, generally only dipping its bill and picking something from the surface, but once or twice it up-ended in the typical manner of other surface-feeding Ducks.

Wigeon.—There were at least thirty Wigeon on this water on April 15th, and I counted thirteen on the 22nd. Most of these birds were in pairs, the drakes constantly whistling as they swam round the ducks, and when swimming holding their necks very straight, an attitude suggestive of sexual excitement. On April 21st I saw a single duck Wigeon on the sea near Parc Point. A few days later all the Wigeon seem to have left.

(To be concluded.)

NOTES AND QUERIES.

MAMMALIA.

Disappearance of a local form of Squirrel. - Referring to the disappearance of my Squirrel, Rotufa dealbata, Blanf. (Journ. Bomb. Nat. Hist. Soc. xi. p. 299 (1897)), I may state the "Dangs," where I found it, is a small area (say six hundred or seven hundred square miles) at the foot of the Western Ghats between Surat and Khandesh. I have travelled all over this area several times, but only found this Squirrel in the northern end of it, and I doubt if the whole habitat was more than one hundred square miles. Blanford said he never saw it in the Rajpipla Hills, just north of the Tapti, and where I found it was about ten to fifteen miles south of that river. After Blanford's paper, I managed to secure four more young ones with great difficulty, three of which I brought home and gave to the "Zoo" about 1897-8. They are all dead, and never bred. Lately I heard that in the famine of 1900 the whole stock was killed and eaten by the jungle tribes, so the three skins in the South Kensington Museum are all that exists of this form .- R. C. WROUGHTON.

AVES.

The Red-backed Shrike (Lanius collurio) and its prey.—Having read with interest the note on this subject by Mr. Steele-Elliott (ante, p. 309), I am induced to ask if the species in question has been commoner than usual during the summer, as I have had an unusual number brought for identification; for, although a common summer visitor, it seems to be a stranger to many people. Amongst those I saw were a pair, in a very mutilated condition, brought by a bee-keeper in the neighbourhood. He informed me two pairs had nested within a hundred yards of each other, very near his hives, and the depredation they had caused amongst his bees was considerable, especially those from one nest where the young were hatched before he discovered their whereabouts; and if I may judge from the crops of the birds he brought his story was not exaggerated, for they were full of their stinging prey. He also said the attack was oftenest made when the bees returned laden from their journey. Of course it is well known

how often Humble-bees, &c., are impaled upon thorns near the nesting-place of this species, which I was not aware was in the habit of making such wholesale slaughter amongst the inhabitants of the hive. In speaking of the Hive Bee (Apis mellifica), it may be noted that many complaints have been made from several quarters during the past summer of the ravages caused by insect enemies; in some cases the whole contents of the hive having been destroyed by what I suppose were larvæ of one of the Wax Moths (Galleria mellonella), as I had several of the white cocoons—empty—of that species sent me as the cause of the depredations, although I believe one or two of those who sent them had very little idea that the moths they saw about the hives were the parents of the grubs that worked the destruction.—G. B. Corbin (Ringwood).

Late Stay of Swift.—Whilst passing close by Bosham Station, near Chichester, on the morning of Sept. 26th, I saw a Swift flying in company with some Swallows and Martins. This instance, though so much earlier than the last I wrote to you about (Zool. 1898, p. 485), is perhaps worthy of note. The Swifts do not, as a rule, seem to linger like the Swallow tribe, but generally all disappear from this locality about the middle of August.—H. Marmaduke Langdale (Compton House, Compton, Petersfield).

On Sept. 17th, at St. Andrews, I saw a Swift hawking over some houses, and I watched it for some time from our garden; next day it had disappeared, though I kept a good look-out. The day was warm and quiet. This is by far the latest date that I have any record of in that part of Scotland. On Sept. 18th, while playing golf on the New Course there, I noticed a pair of Wheatears, and they were still there on Sept. 28rd. I have not my notes by me, but I do not remember seeing this bird there so late in the year.—A. H. Meiklejohn (1, Colville Houses, London, W.).

Notes from Hunstanton, Norfolk.—While spending a short holiday at Hunstanton, I devoted some little time to observing the Swifts, many of which breed in the crevices of the cliffs, and perhaps one or two pairs in houses also. Up to Sept. 12th inclusive, some Swifts were to be seen almost every day, and one could feel pretty sure of being able to find them at the south end of the town just before sunset. I have notes of "quite eight or ten Swifts" on the 10th, and of "several Swifts" on the 11th and 12th. Not one could be seen on the following day, which was cold and cheerless, and the wind, which had for some days been southerly, went round to the north-west. The

14th was a brilliant day, and at about 6 p.m. I watched a single Swift for some time through my field-glasses till it went up quite out of sight, possibly to start on its migration southward, as that was the last I saw of them. During the last few years the Swift has been the subject of several communications to this Journal, and in the volume for 1898 (pp. 436, 485) there are two records of single birds being seen in October; but the fact of several remaining till nearly mid-September seems worthy of record. Gilbert White, who at Selborne had such excellent opportunities of studying the life-history of the Swift, wrote in his twenty-first letter to Barrington, "They retire, as to the main body of them, about the tenth of August, and sometimes a few days sooner; and every straggler invariably withdraws by the twentieth"; and in a P.S. to his fifty-second letter to the same correspondent he mentions the fact of a single Swift being seen on Sept. 3rd, as if he regarded it as something quite extraordinary. On Sept. 12th a young female Black-tailed Godwit was shot on the Snettisham Marshes (which Mr. Clarke kindly showed me when he had just skinned it), and the shooter said there was another with it. On the 15th I saw an immense gathering of Gulls on the musselscalps opposite the Hunstanton lighthouse. There was a very low spring-tide, leaving bare a great extent of feeding-ground, which was literally white with Gulls. So far as I could judge, they were almost all Common Gulls in adult plumage, or nearly so. The day was a perfect one for making observations, with clear atmosphere and a cloudless sky, and from the cliff-top these Gulls presented as charming a picture of bird-life as one need wish to see. - Julian G. Tuck (Tostock Rectory, Bury St. Edmunds).

Bee-Eaters in Yorkshire. — About the middle of the month (September) a gentleman at Bentham, on the borders of Yorkshire and Lancashire, observed three curious birds round his bee-hives, and saw one of them take up a position near the entrance to a hive and swallow eight bees in quick succession. One of the birds was killed, and proved to be a fine adult male of the very rare Bee-Eater (Merops apiaster), which, on dissection, was found to have five working-bees in its stomach. This is, I believe, the fourth occurrence of this African species in Yorkshire, Spain being the nearest breeding-place of the species to our islands.—H. W. Robinson (Lansdowne House, Lancaster).

The Cuckoo and Twite.—In 'The Zoologist' for 1904, pp. 313-14, will be found a note of mine commenting on the alleged occurrence

of a young Cuckoo in a Twite's nest, recorded by Mr. W. Wilson. Mr. Wilson's note (ibid., p. 264) had seemed to me highly suggestive of wrong identification; and I ventured to question the accuracy of his observations, and to ask for further information on some questions which seemed to me to arise from Mr. Wilson's notes on this subject. As an editorial note appended to mine expressed complete confidence in Mr. Wilson's accuracy, I did not venture at the time to say anything further. However, "magna est veritas, et prævalebit"; and it seems now that Mr. Wilson's Twite is Anthus pratensis! As Mr. Wilson has asked for further inquiry about the Twite and its distribution, I may add that this bird breeds in most parts of the British Islands where moors, mountains, and exposed heathy places are found, being by no means confined to the northern parts. As a breeding species, however, it is much less common on the eastern site of our islands than it is in Ireland and the West of Scotland. A well-known Scottish ornithologist to whom I was speaking about this bird some months ago informed me that it does not breed commonly, if at all, near Aberdeen, or in the lower parts of Aberdeenshire; so that it is at least doubtful whether the nest is to be found at all in Mr. Wilson's neighbourhood. In Ireland, in former years, I was quite familiar with the nest of the Twite; and my friend Mr. R. J. Ussher, to whose description of this bird, its nest and eggs, in Ussher and Warren's 'Birds of Ireland,' I beg to refer Mr. Wilson, probably has as good an acquaintance with the breeding habits of the Twite as any man living. The favourite haunts of this bird in Ireland are the rough heathy slopes and headlands cresting the great cliffs overlooking the ocean on the north, west, and south coasts; the more exposed and wind-swept, the better the Twite seems to like them. It also breeds on the inland mountains, but not on the low flat bogs of the central plain, as these, though heath-clad, are perhaps too wet for its liking. I have, however, found the nest on a small stretch of bog-land in co. Down, under the edge of a tuft of rushes in a dry spot where there was no heath, a place remote from any hill. This is, I think, exceptional, but I was informed this year that the nest has since been found in the same locality. The hills and moors of the North of England are a well-known breedingplace; indeed, this species was first made known to science, nearly two and a half centuries ago, from specimens obtained in the neighbourhood of Sheffield by Francis Jessop. In Ireland the Twite frequently lays six eggs, and Mr. Ussher mentions having obtained two clutches of seven, but there are seldom as few as four in a complete clutch. From what Mr. Parkin says (ante, p. 848), I gather that the same holds good in England. The nest is very generally on the

ground, often in a little recess or cavity, but sometimes it is raised above the ground in heath or low furze. Twite's eggs are smaller than those of the Common Linnet, and are easily distinguished from them by their more decided blue ground and darker red spots, which often assume the form of dashes or short crooked lines on the large end of the shell, almost approaching the Bunting type of markings. As to Mr. Wilson's question: Which is the most common bird which the Cuckoo depends on for the rearing of its young ?- in the British Islands the Meadow Pipit is well known to be the commonest fosterparent. Indeed, on moors and uncultivated ground it is comparatively seldom that any other is selected. Of a Cuckoo's egg deposited in a Twite's nest I have never heard of an authentic instance, and I would be much obliged to any one who would inform me of one. The instance mentioned by Mr. Butterfield ('Zoologist,' 1904, p. 315) can hardly be regarded as substantiated. Certain of the Finches are, I know, occasionally chosen by the Cuckoo as the foster-parents of its young. I have myself known Cuckoo's eggs to be found in nests of the Chaffinch, Corn Bunting, Yellowhammer, and Reed Bunting. These birds, though largely seed-eaters, feed their young entirely upon insects and their larvæ, therefore they are quite capable of rearing a young Cuckoo. On the contrary, I have never known of a Cuckoo's egg in the nest of a Linnet, Redpoll, Goldfinch, Bullfinch, or Greenfinch. These feed their young on predigested seeds by disgorging (as also does the Twite), a method of feeding which would not be natural to a young Cuckoo's eggs may have been found exceptionally in the nests of one or other of these species. I have not met with a case myself, but I know there are cases on record of Cuckoo's eggs having been found in such totally unsuitable nests as those even of the Wood Pigeon or Little Grebe (Seebohm's 'British Birds,' vol. ii. p. 383). But these instances may have been due to the fact that the parent Cuckoo was unable to find a suitable nest; or they may point to this strange habit of the Cuckoo being of recent evolution, and as yet imperfectly formed. And is there any proof that the young Cuckoo has ever been actually reared by such a strange foster-parent, or by any bird which feeds its young on vegetable matter? If any such case has come to the knowledge of any reader of 'The Zoologist,' it would be most interesting to have it recorded, to know the evidence and the details if they have been observed .- Allan Ellison (Watton at Stone, Herts).

[Mr. Bidwell, in his "List of Birds that have occurred in Great Britain in whose nest the egg of the Cuckoo has been found" (Trans.

Norf. Nat. Soc. iii. p. 526 (1884)), gives the Twite (Linota flavirostris), and for authority refers to 'Trans. Cumberland Association,' pt. ii. 1876-77, p. 172, a publication I have as yet been unable to consult. Mr. Bidwell also includes in his list the Linnet, Redpoll, Bullfinch, and Greenfinch, birds whose nests Mr. Ellison has never known to contain the egg of a Cuckoo, and are probably exceptional occurrences. Ed.]

Sounds produced by the Eagle Owl.—It is difficult to put the notes of birds into words, and the sound syllabled "Kee-yak" by Mr. Harvie-Brown (ante, p. 313) does not convey my recollection of an Eagle Owl's hoot, but it may utter this note at times. Dresser expresses the ordinary cry of this species as "Hu Hu," which is better. My Eagle Owls, which are unfortunately no longer living, used to begin to hoot in January.—J. H. Gurney (Keswick Hall, Norwich).

Early Arrival of Bernacle Geese (Bernicla leucopsis) on the Solway.—On Sept. 16th I saw a party consisting of about thirty birds on Newton Marsh. One of the local wildfowlers told me they arrived on the 15th; also a party of five Grey Geese, but he did not approach them so as to distinguish the species.—T. L. Johnston (Carlisle).

Grey Geese near Carlisle.—On the afternoon of Sept. 16th a party of about thirty birds were observed on the outskirts of the town flying in a south-west direction. The observers were unable to identify the species, but they were probably Pink-footed Geese (Anser brachyrhynchus).—T. L. Johnston (Carlisle).

Reappearance of the Quail (Coturnix communis).—While I was in Ireland in the middle of July, my brother informed me that Quail had appeared in considerable numbers in his neighbourhood, near Enniscorthy, co. Wexford, this season. They had, in fact, been widespread, and had been noticed by most of the country people about there. It was therefore with great interest that I heard the liquid triple call of this bird in my own neighbourhood here on July 30th, directly after my return home. I heard several of them calling together, first in a field of ripe wheat, and afterwards in a large field of barley, at some little distance from the first locality. As these birds have not been observed here for many years, and have been considered almost extinct for the past twenty-five years in Ireland, their reappearance this season in some numbers is worthy of being recorded.—Allan Ellison (Watton at Stone, Herts).

Greenshank and Ruff in Cheshire.—On Aug. 27th a Greenshank and a Ruff were feeding on a wide expanse of mud at Bosley Reservoir, near Macclesfield. The association of the two large birds was not very close, for during a couple of hours I spent at the place each flew with a flock of Lapwings, and when I disturbed them, as I did several times, they sometimes flew together, and sometimes went diverse ways, but sooner or later they always returned to one part of the reservoir, where there was much shallow water, and apparently food in abundance. The Ruff uttered no note, but the Greenshank was very noisy whenever I put it up, calling with a loud, hard, disyllabic cry; in flight its tail-feathers were fanned out, and its white rump very conspicuous. When feeding it ran quickly in a series of short rushes through the shallow water, sometimes belly-deep, with its bill partly submerged and, I think, slightly open. Its quarry was the fry of some fish which leaped in a flashing shoal from the water in front of it, as though a Pike had rushed among them. These it hunted to some purpose, catching a fish at nearly every rush it made. Ruff's mode of feeding was altogether different; whether on the mud or in the shallow water it walked deliberately, probing the mud with its bill. When at rest its pose was markedly erect compared with that of two Common Sandpipers which were standing near it. It was obviously a male, being not much smaller than the Greenshank, and appeared to be a bird in first plumage; its legs were lead colour, bill dark brown, feathers of the mantle brown with pale edges, crown rather darker than the forehead and hind neck; above and behind the eye was an obscure pale mark; the under parts were white, washed with pale warm buff on fore neck and sides of breast; rump and rectrices brown.—Charles Oldham (Knutsford).

Black Tern (Hydrochelidon nigra) in Cheshire. — On Aug. 19th Mr. T. A. Coward and I watched a Black Tern hawking up and down the mere at Great Budworth. It was a young bird, having brown feathers with pale margins on the mantle, and a broad black band on the carpus. A week later—on Aug. 26th—we saw another at the same place, apparently a bird in the plumage of the second autumn; no brown on the mantle, which was frosty grey, the black band on the carpus was smaller, and the legs pale reddish brown, not black as in the younger bird.—Charles Oldham (Knutsford).

The Black Tern (Hydrochelidon nigra) near Ringwood.—As a class the Terns are of somewhat irregular occurrence in this particular locality, none, as far as I know, nesting in the county; but in the autumn—and more rarely in the spring—several species, especially the

Common Tern and a few of the Arctic Terns, are sometimes seen in their aerial, poising flight over the river, and on rare occasions I have seen a stray Tern in summer-I may note a Lesser Tern in June, 1889; but in their autumnal migration most species visit us, the Black Tern certainly not being the most frequent. During August I had heard of Terns being seen upon various parts of the river, and that some were smaller than others; two of these latter were shot, and proved to be nigra, with the white forehead, collar, and under parts the marks of immaturity. Both were very lean in body; the stomach of one was quite empty, the other contained a few insect remains, and one or two seed-like objects which it might have taken from the surface of the water. Most of the specimens I have seen were in the plumage as described above, but I have one in which the under parts are much suffused with dark grey, and the white collar is not so conspicuousan older bird, I imagine; and I have yet another, killed in this neighbourhood some years ago-a veritable "Black Tern," in the almost uniform dusky plumage of the adult. If I recollect rightly, several others were seen at the same time as this latter was shot, and it is certain this class of bird does not visit us so frequently as it used to do, arising, no doubt, from the changed condition of the river; a large lake-like sheet of water, being either densely overgrown with reeds or become dry land, with the main stream running through it in two or three divided channels to the bridges, while the volume of water passing through them must be considerably less than it was some years ago.— G. B. CORBIN (Ringwood).

Manx Shearwater in Worcestershire.—A Manx Shearwater (Puffinus anglorum) was shot by a working-man on a small piece of water near Bromsgrove, Worcestershire, on Sept. 16th, and was brought to me for identification by Mr. E. A. Stubbs, of Acocks Green, near Birmingham, in whose possession it remains. I am aware of but two other occurrences of this bird in the Birmingham district. Quatermain, of Stratford-on-Avon, told me some years ago that he had had one taken there, but what eventually became of it I do not know. On Sept. 5th, 1880, one was captured by a boy in Highgate Park, Birmingham. It was taken to a local birdstuffer, and from him passed into the collection of Mr. R. W. Chase, who has recorded it elsewhere. points at which these birds were obtained are all on the south side of Birmingham, and it seems probable that they were vagrants from the colonies of Pembrokeshire. They would conceivably follow the Bristol Channel and Severn, the Stratford bird striking the Avon at Tewkesbury and ascending to Stratford. The others would probably leave the Severn somewhere near Worcester, and, flying north-east, reach Bromsgrove and Birmingham respectively.—Thomas Ground (Moseley, Birmingham).

Manx Shearwater (Puffinus anglorum) at Yarmouth.-On Sept. 28th I felt strongly tempted to take a stroll to the harbour mouth by the beach, for at this season of the year various "rock birds" leisurely work south, simultaneously with the inshoring of the Herring shoals; and, after a few days' easterly winds, there is a probability of tired-out birds being washed ashore. I saw one wretched Red-throated Diver muddling about in the breakers, at which some boys were throwing stones. By a strong effort it dived and came up beyond the rougher water, and got away. An immature Guillemot and a very juvenile Razorbill only rewarded my two-mile inspection of the debris at the tide-mark, until nearing the breakwater, when I picked up a Shearwater. I had my nearly blind old chum Benjamin Dye, the naturalistbaker, with me, and, placing the bird (probably five days dead) in his hands, asked him to identify it. He did so promptly enough, and, as his fingers travelled across the head to the tip-end of the beak, exclaimed excitedly, "A Manx Shearwater, by Jove!" He had guessed correctly, whereon I told him to keep it, as an addition to his small collection of rare Yarmouth birds.—ARTHUR H. PATTERSON (Ibis House, Great Yarmouth).

Summer Migrants in South-western Hants. - In this corner of Hampshire our summer visiting birds have been rather uncertain in appearance, perhaps the most noticeable being the apparent scarcity of the Swallow; few have been seen this season, where some years ago hundreds were observed, and preparatory to their autumnal journey countless numbers formerly congregated, in the morning sunshine, upon the glass roof of the Corn Exchange, as if for discussion and arrangement; but up to the middle of August I did not see a dozen at the old rendezvous, and greatly regretted the loss of their much-loved busy twitter soon after dawn. Since that date the numbers were augmented by arrivals from farther north, but few compared with former years. In the early summer a pair came to the old nest in a chimney of the house, and, as in previous years, I noticed how early the song was begun-at the very break of day; and even while it was yet dark twitterings were occasionally uttered, as if eager to begin the happy summer notes. The House-Martin and Sand-Martin were in about usual numbers in their respective localities; in fact, the former species has again become commoner than it was some few years ago. Of this class the Swift was decidedly the most abundant, at times

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being the only species to be seen on the wing. It came early—I saw the first April 26th-and it stayed later than usual-I saw three Aug. 16th, and one Aug. 19th-rather a late date, as far as my experience goes. The Nightingale, judging from the frequency of its song from mid-April onwards, was far from rare; but some of its congeners, as the Blackcap, Reed-Warbler, Lesser Whitethroat, Grasshopper-Warbler, &c., cannot be named in the same catalogue; whilst the scolding "chiddy, chit, chit" of the Sedge-Warbler-so suggestive of warm days and pleasant summer evening rambles—was more infrequent than the Nightingale's song. The Cuckoo, Wryneck, and Nightjar were seen and heard in fair numbers. For the past two or three years the Land-Rail has most certainly decreased, but not to be compared with the decrease of the beautiful little Yellow Wagtail (Motacilla raii), which seem to have almost deserted us. A few years ago it nested freely in the meadows where the marsh-marigold spread its yellow mantle, and the elegant dancing flight of the bird as it rose, with its short but merry note, from feeding close to the browsing cattle, was one of the most pleasant sights and sounds to the eye and ear of any one who was not entirely dead to the beauties of nature. It was not so last summer. A few years ago the birds were so common that the fish-poachers knew the exact whereabouts of the old river-keeper, up or down stream, by watching the movements of the "Yellow Mollies," as they are locally called. In a day spent upon various parts of the river I saw but one bird, where in previous summers I have seen scores in a three-miles row, and a friend of mine, who many times searched narrowly for the nest (in anticipation of finding eggs as commonly as formerly), was quite unsuccessful, and did not see I hope, however, another season the record will be brighter. a bird. As if in part compensation for the loss of this elegant little species, it may be remarked that a number of Redshanks have in recent years nested in the meadows by the river, and their unmistakable note and presence have become comparatively familiar to those who a few years ago were ignorant of the existence of such a bird. Some eggs taken, sold, and eaten as those of the Lapwing undoubtedly belonged to the Redshank, as I was shown several to which these remarks apply. did not hear of either Harriers or Honey-Buzzard, except that a "large brown Hawk" (possibly a Common Buzzard) frequented a wood and heathy piece of land for some time about the end of May, but it escaped both trap and gun, as far as I could learn. Several Hobbies were seen, but not as nesting birds. I saw one about the middle of June, and another later in the season. A few evenings ago I saw a

large bird following the few Swallows as they hurriedly flew towards their autumn roosting-place in the reeds by the river, and, if I mistake not, it was a Hobby, but the quick movements of the bird in the increasing dusk prevented a certainty of identification; such a habit would not be at variance with what I have before recorded of this handsome little Falcon.—G. B. Corbin (Ringwood).

"Birds Nesting in Andalusia." — My friend the Rev. F. C. R. Jourdain, who was with us for a part of the time in Andalusia, wishes me to make the following Corrigenda et Addenda to the list of species seen in 1905, published in the last number of 'The Zoologist' (ante, pp. 326-28):—

Corr.—Melodious Warbler; dele reference to eggs.

Add.—Western Olivaceous Warbler (H. opaca); eggs, May 11th. Blackcap; eggs, May 10th. Cetti's Warbler; eggs, May 12th. Roller. Little Owl. Montagu's Harrier. Stone Curlew. Avocet. Dunlin. Oystercatcher. Grey Plover; April 20th. Lesser Tern. L. melanocephalus (?).

The Addenda were met with before joining us and after leaving us. Reg. B. Lodge.

A Query. — Despite the constant attention which observers like Mr. Oldham are bestowing on the habits of the Noctule, there still remain several doubtful points in its life-history. We know, for instance, that the sexes fly together, but how do they assort themselves during sleep or hybernation? Was the late J. H. Gurney right in suggesting that the colonies are often composed of a single sex? Again, what is the colour of the newly-fledged young? Are they of the same tints as the adults, or are they darker? Any information. however slight, which any reader of 'The Zoologist' may be able to publish on these questions would certainly contribute towards a more complete knowledge of the natural history of this fine Bat.—G. E. H. Barrett-Hamilton.

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VERMES.

Malformed Earthworm .- I had brought me (Sept. 4th), from the village of Upton, near Yarmouth, a most remarkable Lobworm. from the middle of which branched two separate tails. From the tip of the head to that of the longest tail is about six inches, to that of the other about five and a half. Amongst the many myriads of worms I have seen, I never saw a malformation of this kind; the only other instance of which I have heard is one figured in the 'Strand Magazine' of September, 1900, which was discovered at Norwood .- ARTHUR H. PAT-TERSON (Ibis House, Great Yarmouth).

NOTICES OF NEW BOOKS.

The Origin and Influence of the Thoroughbred Horse. By WILLIAM RIDGEWAY, M.A., F.B.A., &c. Cambridge: at the University Press.

A BOOK on this subject was distinctly wanted, and these pages constitute a volume which will be regarded for a long time to come as one of considerable referential value. Most Englishmen are supposed to know something about a Horse, though few do so even in a general way, as may be well understood by studying that immense gang of nondescript gamblers who infest every racecourse, and degrade a great and useful sport; these individuals, as a rule, are ignorant of even the points of a thorough-Many real horsemen, on the other hand, are bred Horse. equally without an adequate conception of the origin of the animal they love so well; and there are naturalists who perhaps know least of the species which may almost be said to have created some of our national instincts. At all events, it is generally held that the Arab Horse was the ultimate source of our thoroughbred and half-bred Horses, a view which Professor Ridgeway holds has "no historical foundation, that the Arabs had only got their fine breed of Horses from North Africa at a period later than the Christian era; and that, on the other hand, there was the clearest evidence of the existence in Libya of a fine breed of Horses for a thousand years before the Arabs ever bred a Horse." That the Libyan Horse is the stock from which all the best Horses of the world have sprung is the text of this book, and in support of the thesis a vast material of information relating to both prehistoric and historic times has been compiled and arranged.

Among the many commentators on the Book of Job, Professor Ridgeway apparently strikes a new suggestion that the writer of that poem, with all his wealth of imagery concerning the war-Horse, did not know the Horse in his own land—supposing that to be Arabia Petræa—but derived his knowledge of

the animal from the contiguous regions of Palestine and Baby-He recalls the biblical description of the possessions of Job as consisting of Sheep, Camels, and Oxen, his only equine possessions being five hundred she-Asses, not a single Horse being mentioned; nor does he believe that the Sabæans, who are described as destroying the flocks and herds of the patient sheikh, were any better provided with Horses than they were in the days of Strabo. A similar comment is made on the animal possessions of Terah, Abraham, Lot, and Laban, in the enumerations of which no mention of the Horse occurs : and Prof. Ridgeway quotes with approval the opinion of Hilprecht. that "the Horse appears in Babylonia first shortly before the middle of the second millennium." Mr. Lydekker's theory of the Indian origin of the Arab Horse is considered sufficiently disproved by the fact that, "as the Horses of Libya were proverbial for their gentleness before the Christian era, so, on the contrary, the Horses of North-western India are specially mentioned by Ælian on account of their violent tempers and the difficulty of riding them, which necessitated the use not merely of bits but of muzzles to control them."

Of the colour of the thoroughbred Horse, it has already been pointed out by Major-General Tweedie that the tendency of the highest breeding in latitudes far separated is to wipe out all colours save bay and chestnut. Prof. Ridgeway gives statistics derived from the colours of the first three Horses in the Derby, Oaks, and St. Leger for the three decades from 1870 to 1899, as proving that not merely has grey disappeared altogether, and that black is almost gone, but that chestnut is also disappearing as well as brown, while the English racing stock is steadily becoming bay.

This book can be neglected neither by the naturalist, horsebreeder, nor sportsman, while there is sufficient archæological and classical discussion to engage the attention of scholarly readers.

